Practice Exercise #11: Area of Circle Enclosing a Square

http://www.comp.nus.edu.sg/~cs1020/4_misc/practice.html

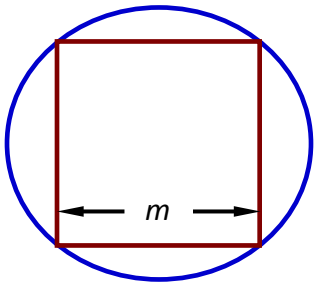
Reference: Week 2 OOP Part 1

Objectives:

1. Using **Math** class

Task statement:

The following problem was discussed in CS1010 Week 1[†]. A square of side *m* is enclosed in a circle, with the corners of the square touching the boundary of the circle, as shown below. What is the area of the circle?



Write a program **CircleArea.java** to read in the length (a positive value of type **double**) of one side of a square and compute the area (type **double**) of the enclosing circle.

You should use the **Math** class attribute (constant) **PI** for the value of π. You should also write a method **circleArea(double r)** that takes *r*, the radius of the circle, as the parameter and returns the computed area of the circle.

The area should be printed in 2 decimal places, as shown in the sample runs below.

Sample runs:

```
Enter side of square: 12.3
Area of circle = 237.65

Enter side of square: 200
Area of circle = 62831.85
```

[†] Lecture slides for CS1010 are available on http://www.comp.nus.edu.sg/~cs1020/4_misc/cs1010_lect.html